

## 7.4 Solving Systems

Name \_\_\_\_\_

For each problem:

1. State what the variables represent.
2. State the equations.
3. State the solution.

1. The sum of Gregger's (the boy has no taste in football teams) most favorite numbers of all time is 30. Their difference is 12. What are Gregger's two most favorite numbers of all time?

2. Two angles have a sum of  $180^\circ$ . Their difference is  $70^\circ$ . Find the angles.

3. The sum of Anne's two favorite numbers is 64. Twice the smaller number is 10 less than the larger number. Find Anne's most favorite numbers of all time.

4. Manny loves numbers! He found two numbers such that 5 times the larger number plus 3 times the smaller is 47, and 4 times the larger minus twice the smaller is 20. Find Manny's most favorite numbers!

5. In 2006 there were 812 students attending school at Forest Park Middle School. There were 36 more girls than boys. How many girls were attending Forest Park Middle School?

6. Twenty-six students entered their project in world's coolest science fair. The number of girls was 4 fewer than twice the number of boys. How many boys entered their project in the world's coolest science fair?

7. Sydney cut a 50-foot piece of rope into two pieces, believe it or not, without cutting herself. Anyway, Sydney found that the one piece of rope is 9 times longer than the length of the other. What is the length of the longer piece of rope that Sydney cut?

8. Together Niko and Jason sold 137 tickets to Walt Disney on Ice Show, this was after they cleaned desks for Mrs. Koenig at lunch one day. Anyway, Niko sold 10 fewer than twice as many as Jason. How many tickets did Niko sell?

9. Trevor loves to draw rectangles, so he drew a cute rectangle. The length of the cute rectangle is 5 more than twice the width. The perimeter is 130. What is the length of the rectangle that Trevor drew?

10. Alex (which one??) went grocery shopping. At Pick-N-Save Alex discovered something amazing: 6 grapefruit cost as much as a dozen oranges. The cost of a dozen grapefruit and two dozen oranges is \$12.00. How much does one grapefruit cost?